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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,969	06/27/2003	Michael John Gronseth	S01.12-0985/STL 11274.00	7433
27365	7590	06/22/2005	EXAMINER CHEN, TIANJIE	
SEAGATE TECHNOLOGY LLC C/O WESTMAN CHAMPLIN & KELLY, P.A. SUITE 1400 - INTERNATIONAL CENTRE 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319			ART UNIT 2652	
DATE MAILED: 06/22/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/608,969

Applicant(s)

GRONSETH ET AL.

Examiner

Tianjie Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 is/are allowed.
- 6) ☒ Claim(s) 6,9-14,16 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 7,8,15,17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Non-Final Rejection

Claim Objections

1. Claim 13 is objected to because of the following informalities:

- In claim 13, line 5; "another" should be changed to --an other--.
- In claim 13, line 5; --formed-- should be inserted after "surface."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 6, 9-14, and 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamakura et al (US 2003/0227716).

Claim 6, Yamakura et al shows a method for fabricating a slider [0116] to [0120] and Figs. 4 and 10A including the step of: fabricating a trench (at the left edge of 13) having a recessed trench surface spaced from a trailing end surface 8 of the slider to form a trailing edge of a raised bearing surface of the slider defined by an etched depth of the trench of the slider.

Claim 9, Yamakura et al shows a head including: a slider in Fig. 4 having a transducer portion 7 fabricated proximate a trailing end of the slider 14+15; and a trench (the recessed portion next to the numeral 8) in an overcoat layer 15 of the

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transducer portion forming a trailing edge of the slider and the trailing edge having a recessed dimension relative to a trailing end surface of the slider defined by an etched depth of the trench of the slider ([0123]).

Claim 10, Yamakura et al further shows that the overcoat layer 15 is an alumina layer ([0067], line 4).

Claim 11, Yamakura et al further shows that the transducer portion includes inductive and/or magnetoresistive transducer elements ([0059], lines 5-7).

Claim 12, Yamakura et al further shows that the trench forms a trailing edge of a raised bearing surface of the slider (Fig. 4).

Claim 14, Yamakura et al shows the step of planarizing or lapping the disc facing surface of the slider addition to the one process step and the other process step (Fig. 10 A).

Claim 18, Yamakura et al shows that the raised bearing surface and the recessed bearing surface and the raised bearing trailing edge of the raised bearing surface are etched to different orthogonal surfaces of the slider in the one and the other process steps.

Claim 19, Yamakura et al shows etching the trench relative to a first orientation in the one process step; and etching the recessed bearing surface relative to a second orientation in the other process step.

Claim 20 and 21, Yamakura et al shows a slider.

Claims 20 and 21 are "product by process" claims are directed to the product per se, no matter how actually made, see *In re Hirao*, 190 USPQ 15 at 17 (footnote 3 CCPC, 5/27/76); *In re Brown*, 173 USPQ 685 (CCPA 5/18/72); *In re Luck*, 177 USPQ 523 (CCPA, 4/26/73); *In re Fessmann*, 180 USPQ 324 (CCPA, 1/10/74); *In re Thorpe*,

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227 USPQ 964 (CAFC, 11/21/85). The patentability of the final product in a "product by process" claim must be determined by the product itself and not the actual process and an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not.

Claim 13, Yamakura et al shows the trench is fabricated in an inherent one process step and including the step of: fabricating a raised bearing surface 4a and a recessed bearing surface (the surface at left side next to the surface 4a in vertical direction) on a disc facing surface of the slider in an inherent other process step and the raised bearing surface formed in the other process step having a trailing edge defined by the trench fabricated in the one process step.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamakura et al in view of Horr et al (US Re.30601).

Yamakura et al further show the raised bearing surface and the recessed bearing surface are formed using a masking process ([023])but fails to show a photoalignment masking process.

Horr et al show a photoalignment masking processing being used in fabrication of a wafer (column 2, lines 19-20).

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It would have been obvious at the time the invention was made to one of ordinary skill in the art to apply the photoalignment masking process in fabrication. The rationale is as follows: Yamakura et al shows a mask process used in fabrication on a wafer. Horr teaches that using of a photoalignment masking process can avoid physically touching with any portion of the photoalignment tool thus avoiding the possibility of contamination of the surface (Column 2, lines 27-32). One of ordinary skill in the art would have been motivated to use the photoalignment mask process for avoiding contamination of the surface.

Allowable Subject Matter

4. Claims 1-5 and 21 are allowed.

Claims 7, 8, 15 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

- With regard to claims 1 and 7, as the closest reference, Yamakura et al (US 2003/0227716) shows a method for fabricating a slider including the step of: fabricating a trench having a recessed trench surface spaced from a trailing end surface of the slider to form a trailing edge of a raised bearing surface of the slider defined by an etched depth of the trench of the slider; **but fails to show** that the trench is fabricated at a wafer level prior to slicing the wafer into slider bars to form a plurality of sliders therealong.
- Claim 15, as the closest reference, Yamakura et al (US 2003/0227716) shows a method for fabricating a slider including the step of: fabricating a trench

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having a recessed trench surface spaced from a trailing end surface of the slider to form a trailing edge of a raised bearing surface of the slider defined by an etched depth of the trench of the slider, and planarization step, **but fails to show** that the step of planarizing or lapping the disc facing surface of the slider **prior to** the other process step and after the one process step.

- Claim 17, as the closest reference, Yamakura et al (US 2003/0227716) shows a method for fabricating a slider including the step of: fabricating a trench having a recessed trench surface spaced from a trailing end surface of the slider to form a trailing edge of a raised bearing surface of the slider defined by an etched depth of the trench of the slider, and planarization step, **but fails to show** that the trench is etched in the one process step **prior** forming the raised bearing surface and the recessed bearing surface in the other process step.
- Applicant asserts that the trailing edge is fabricated on all the heads at the wafer level, which is more efficient and less costly than fabrication at the slider bar level (Specification, p. 6, lines 16-18).

Response to Arguments

5. Applicant's arguments filed 06/09/2005 have been fully considered but they are not persuasive.

- Applicant argues: "In Yamakura, the etched depth forms recessed groove surfaces and not the trailing edge as recited in claim 6."
- Examiner's position: In Yamakura, the etched depth forms recessed groove surfaces, which is located on the trailing side forming an edge. So Examiner

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does not see any reason showing that it is not the trailing edge as recited in claim 6.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is 571-272-7570. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TIANJIE CHEN
PRIMARY EXAMINER